I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 517 916 157 US, in an envelope addressed to: MS Sequence, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: December 27, 2004 Signature:

(Sharon Bizokas )

Docket No.: 61536(46342)

(PATENT)

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Hirokazu Matsumoto et al.

Application No.: 10/500,175

Confirmation No.: 3286

Filed: June 25, 2004

DEC 2 7 2004

Art Unit: N/A

For: BODY WEIGHT GAIN INHIBITOR

**Examiner: Not Yet Assigned** 

## RESPONSE TO NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATION CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

MS Sequence Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

This is in response to the Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, dated October 27, 2004. Applicants are submitting their response herewith within the two-month response period set to expire on December 27, 2004.

The U.S. Patent and Trademark Office has taken the position that the previous "Sequence Listing" in computer readable form did not comply with the requirements of Section 1.824 for the stated reason that it contained several raw sequence listing errors. Submitted herewith in connection with the above-referenced patent application is a substitute, computer readable copy of the Sequence Listing that corrects the defects noted in the raw sequence listing. Also enclosed is a paper copy of the substitute Sequence Listing (36 pages, numbered 1-36), as well as a copy of the Notice. The contents of the computer readable copy and the paper copy of the substitute Sequence Listing are the same. No new matter has been added to the substitute Sequence Listing.

Applicants respectfully request the above-referenced patent application be entered in the application and placed upon the files for examination.

No fees are believed to be necessary in connection with the enclosed submission. However, should any fees be required, the Commissioner is hereby authorized to charge any fees, including any required extension fees, which may be required to consider this submission to Deposit Account No. **04-1105**.

Respectfully submitted,

Jennifer K. Rosenfield

Registration No.: 53,531 EDWARDS & ANGELL, LLP

P.O. Box 55874

Boston, Massachusetts 02205

(617) 439-4444

Agent for Applicant

Dated: December 27, 2004



#### United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS P.O. DOX 1450 Alexandria, Vinginia 22313-1450

| U.S. APPLICATION NUMBER NO. | FIRST NAMED APPLICANT | ATT              | Y. DOCKET NO. |
|-----------------------------|-----------------------|------------------|---------------|
| 10/500,175                  | Hirokazu Matsumoto    | 61:              | 536 (46342)   |
|                             |                       | INTERNATIONAL AF | PLICATION NO. |
|                             | _                     | РСТ/ЈР02         | /13781        |
| 21874                       |                       | LA. FILING DATE  | PRIORITY DATE |
| EDWARDS & ANGELL, LLP       | _                     | 12/27/2002       | 12/28/2001    |

21874 EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205

CONFIRMATION NO. 3286
371 FORMALITIES LETTER
\*OC000000014198815\*

Date Mailed: 10/27/2004

# NOTIFICATION TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

The following items MUST be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
  - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of Annex C of the Administrative Instructions and 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
  - APPLICANT MUST PROVIDE:
    - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
    - A statement that the contents of the paper or compact disc and the computer readable form are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d).
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
  - For Rules Interpretation, call (703) 308-4216
  - To Purchase Patentin Software, call (703) 306-2600
  - For Patentln Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

A copy of this notice MUST be returned with the response.

| SHAKEEL AHI | MED |      |  |
|-------------|-----|------|--|
|             |     | <br> |  |

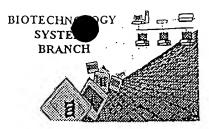
Telephone: (703) 305-3659

## PART 1 - ATTORNEY/APPLICANT COPY

| U.S. APPLICATION NUMBER NO. | INTERNATIONAL APPLICATION NO. | ATTY, DOCKET NO. |
|-----------------------------|-------------------------------|------------------|
| 10/500,175                  | PCT/JP02/13781                | 61536 (46342)    |

FORM PCT/DO/EO/922 (371 Formalities Notice)

## RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

Source:

Date Processed by STIC:

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS. PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,

TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, EFS Submission User Manual - ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- 3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04): U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby. Room 1B03, Arlington, VA 22202

Revised 05/17/04

# Sequence Listing Error Summary

| ERROR DETECTED                   | SUGGESTED CORRECTION SERIAL NUMBER 101500175   | •                                    |
|----------------------------------|--|--------------------------------------|
| ATTN: NEW RULES                  | CASES DE STATE CORRECTION SERIAL NUMBER: 0500,75   |                                      |
| 1 111 111                        | CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE ucleics. The number/text at the end of each line is   |                                      |
| Wrapped Ar                       | ucleics The number/text at the end of each line "wrapped" down to the next line. This may occur if your file prevent "wrapping."   |                                      |
| 2Invalid Line I                  | Length The rules require that a line not exceed 72 characters in length. This includes white spaces.   |                                      |
| 3Misaligned A                    | mino. The most   |                                      |
| Numbering                        | The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers:   |                                      |
| Non-ASCII                        | The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please   |                                      |
| 5Variable Lengi                  | Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, residue having variable length and indicate in the <220>-<223> section that some may be missing.  A "bug" in Parcella.  |                                      |
| 6Patentin 2.0                    | A "bug" in Patentin version 2.0.1  |                                      |
| "bug"                            | A "bug" in Patentln version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s)  Normally, Patentln would automatically generate this section from the the subsequent amino acid sequence. Please manually copy the relevant <220>-<223> section to Artificial or Unknown sequences. |                                      |
| 7Skipped Sequen                  |  |                                      |
| (OLD RULES)                      | (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  (xi) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  This sequence is intentionally skipped  | and the                              |
|                                  | 10 t Mg ( 140 Mg ( 140 Mg  |                                      |
| 8 Skinned Samuel                 | Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences   |                                      |
| 8Skipped Sequence<br>(NEW RULES) | Sequence(s)missing. If intentional, please insert the following lines for each skipped sequence <400> sequence id number <400> sequence id number <000   |                                      |
| 9Use of n's or Xaa's             | · · · · · · · · · · · · · · · · · · ·  |                                      |
| (NEW RULES)                      | Use of n's and/or Xaa's have been detected in the Sequence Listing.  Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  Per 1.823 of Sequence Rules at 2.22 represents.  |                                      |
| 10Invalid \$213>                 | prease explain location of n or X22, and which residue n or X22 represents   |                                      |
| Response                         | Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or is Artificial Sequence.  |                                      |
| 11Usc of <220>                   | response is Unknown or   |                                      |
| tarraga e                        | Use of <220≥ to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  (See "Federal Register," 00/01/1998, Vol. 63, No. 104, pp. 20631-323  | · ********************************** |
| Patentin 2.0 "bug"               | Please do not use "Copy to Disk" function of Patentln version 2.0. This causes a correct to St.  |                                      |
|                                  | by material, please use "File Manager" or any other manual means to good faw sequence  |                                      |
|                                  | "n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u> AMC - Biotechnology Systems Branch - 09/09/2003  |                                      |
|                                  | 67 - 77-1-113 Dianch - 09/09/2003  |                                      |



PCT

RAW SEQUENCE LISTING DATE: 07/06/2004
PATENT APPLICATION: US/10/500,175 TIME: 12:17:47

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Output Set: N:\CRF4\07062004\J500175.raw

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9 <140> CURRENT APPLICATION NUMBER: US/10/500,175

C--> 9 <141> CURRENT FILING DATE: 2004-06-25

9 <150> PRIOR APPLICATION NUMBER: JP2001-403260

9 <150> PRIOR APPLICATION NUMBER: JP2001-403260

10 <151> PRIOR FILING DATE: 2001-12-28

12 <150> PRIOR APPLICATION NUMBER: JP2002-93096

13 <151> PRIOR FILING DATE: 2002-03-28

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17 <210> SEQ ID NO: 1

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19 <212> TYPE: DNA

20 <213> ORGANISM: Artificial Sequence

22 <220> FEATURE:

23 <223> OTHER INFORMATION: Primer

25 <400> SEQUENCE: 1

26 atcgattaca atgcaggccg ctgggcaccc ag 32

28 <210> SEQ ID NO: 2

29 <211> LENGTH: 32

30 <212> TYPE: DNA

31 <213> ORGANISM: Artificial Sequence

33 <220> FEATURE:

34 <223> OTHER INFORMATION: Primer

36 <400> SEQUENCE: 2

37 actagtgccc ttcagcaccg caatatgctg cg 32

39 <210> SEQ ID NO: 3

40 <211> LENGTH: 1023

41 <212> TYPE: DNA

42 <213> ORGANISM: Human

44 <400> SEQUENCE: 3

45 atogattaca atgoaggoog otgggoacco agagoocott gacagoaggg gotcottoto 46 cetececaeg atgggtgeea aegtetetea ggacaatgge aetggeeaca atgecaeett 180 47 etcegageca etgeogttee tetatgtget eetgeoogee gtgtacteeg ggatetgtge 240 48 tgtggggetg actggcaaca cggccgtcat cettgtaate etaagggege ccaagatgaa 49 gacggtgacc aacgtgttca teetgaacet ggeegtegee gacgggetet teacgetggt 300 360 50 actgecegte aacategegg ageacetget geagtactgg ceettegggg agetgetetg 420 51 caagetggtg etggeegteg accaetacaa eatettetee ageatetaet teetageegt 52 gatgagegtg gacegatace tggtggtget ggccacegtg aggtecegee acatgecetg 53 gegeaectae eggggggega aggtegeeag cetgtgtgte tggetgggeg teaeggteet 540 54 ggttctgccc ttcttctctt tcgctggcgt ctacagcaac gagctgcagg tcccaagctg 600 55 Egggetgage ttcccgtgge ccgagcaggt ctggttcaag gccagccgtg tctacacgtt 660

56 ggteetggge ttegtgetge eegtgtgeae catetgtgtg etetacacag aceteetgeg

P J.6

Does Not Comply
Corrected Diskette Needed

720



DATE: 07/06/2004

TIME: 12:17:47

## RAW SEQUENCE LISTING PATENT APPLICATION: US/10/500,175

Input Set : A:\61536 Sequence Listing.txt
Output Set: N:\CRF4\07062004\J500175.raw

|   | 57  | cago  | gctgo        | gg g               | gccgt | gcgg    | gc to        | cgct     | ctgg  | ago   | caag         | gct     | ctag  | gcaa  | igg ( | ccagg       | cggaa  | 780  |
|---|-----|-------|--------------|--------------------|-------|---------|--------------|----------|-------|-------|--------------|---------|-------|-------|-------|-------------|--------|------|
|   | 58  | ggtg  | gacco        | gtc c              | tggt  | cctc    | g to         | gtgo     | tggc  | cgt   | gtgo         | ctc     | ctct  | gctg  | ga d  | gccc        | ttcca  | 840  |
|   | 59  | ccts  | gcct         | ct g               | tcgt  | ggcc    | c to         | gacca    | cgga  | cct   | gccc         | cag     | acco  | cact  | gg t  | cato        | agtat  | 900  |
|   | 60  | gtco  | taco         | gtc a              | tcac  | cago    | c to         | agct     | acgo  | caa   | actcg        | ıtgc    | ċtga  | acco  | ct t  | cctc        | tacgc  | 960  |
|   |     |       |              |                    |       |         |              |          |       |       |              |         |       |       |       |             | gcact  | 1020 |
|   |     | agt   |              | _                  |       |         | -            |          |       |       | -            |         | _     |       |       |             |        | 1023 |
|   | 64  | <210  | )> SE        | EQ II              | NO:   | 4       |              |          |       |       |              |         |       |       |       |             |        |      |
|   | 65  | <211  | .> LE        | ENGTH              | I: 33 | 3       |              |          |       |       |              |         |       |       |       |             |        |      |
|   | 66  | <212  | ?> TY        | PE:                | PRT   |         |              |          |       |       |              |         |       |       |       |             |        |      |
|   | 67  | <213  | s> OF        | RGANI              | SM:   | Huma    | in           |          |       |       |              |         |       |       |       |             |        |      |
|   | 69  | <400  | )> SE        | EQUEN              | ICE:  | 4       |              |          |       |       |              |         |       |       |       |             |        |      |
|   | 70  | Met   | Gln          | Ala                | Ala   | Gly     | His          | Pro      | Glu   | Pro   | Leu          | Asp     | Ser   | Arq   | Gly   | Ser         | Phe    |      |
|   | 71  |       |              |                    |       | 5       |              |          |       |       | 10           | -       |       |       | •     | 15          |        |      |
|   |     |       | Leu          | Pro                | Thr   | Met     | Glv          | Ala      | Asn   | Val   | Ser          | Gln     | Asp   | Asn   | Glv   | Thr         | Gly    |      |
|   | 73  |       |              |                    | 20    |         | - 1          |          |       | 25    |              |         | _     |       | 30    |             | -      |      |
|   |     | His   | Asn          | Ala                |       | Phe     | Ser          | Glu      | Pro   |       | Pro          | Phe     | Leu   | Tvr   |       | Leu         | Leu    |      |
|   | 75  |       |              | 35                 |       |         |              |          | 40    |       |              |         |       | 45    |       |             |        |      |
|   |     | Pro   | Δla          |                    | Tvr   | Ser     | Glv          | Tle      |       | Ala   | Val          | Glv     | Leu   |       | Glv   | Asn         | Thr    |      |
|   | 77  |       | 50           | , 42               | -1-   | 001     | 0-1          | 55       | 0,0   |       |              | 0-1     | 60    |       |       | •           |        |      |
|   |     | Δla   |              | Tle                | T.e11 | Val     | Tle          |          | Ara   | Δla   | Pro          | Tays    |       | Lvs   | Thr   | Val         | Thr    |      |
|   | 79  |       |              |                    |       | • • • • | 70           |          |       |       |              | 75      |       |       |       |             | 80     |      |
|   |     |       | Val          | Phe                | Tle   | Len     |              | Leu      | Ala   | Val   | Δla          | . –     | Glv   | Len   | Phe   | Thr         |        |      |
|   | 81  | 11011 | <b>,</b> , , | 1110               | 110   | 85      | 11011        | <u> </u> |       | ٠٠٠   | 90           | 1100    | 017   | LCu   |       | 95          |        |      |
|   |     | Val   | T.e.11       | Pro                | Val   |         | Tle          | Δla      | Glu   | His   |              | T.e.11  | Gln   | Tyr   | Trn   | Pro         | Phe    |      |
|   | 83  | Val   | LCu          | 110                | 100   | ASII    | 110          | MIU      | OLU   | 105   | шсц          | Licu    | OTIL  | - 7 - | 110   | 110         | 1110   |      |
|   |     | Glv   | Glu          | T.em               |       | Cvs     | Lvs          | Len      | Val   |       | Δla          | Val     | Asp   | His   |       | Asn         | Tle    |      |
|   | 85  | Ory   | 014          | 115                | Leu   | Cyb     | <b>L</b> , 5 |          | 120   |       | 1114         | • • • • | 1101  | 125   | -1-   |             |        |      |
|   |     | Phe   | Ser          |                    | Tle   | Tvr     | Phe          | T.em     |       | Val   | Met          | Ser     | Val   |       | Ara   | Tyr         | Leu    |      |
|   | 87  | THE   | 130          | DCL                | 110   | 1 y L   | THE          | 135      | niu   | VUI   | ricc         | рĊТ     | 140   | пор   | n. 9  | - 7 -       | Deu    |      |
|   |     | Val   |              | T.e.11             | Δĺa   | Thr     | val          |          | Ser   | Δτα   | His          | Met     |       | Trn   | Ara   | Thr         | Tvr    |      |
|   |     | 145   | Val          | LCu                | nia   | 1111    | 150          | mrg      | JCL   | nr 9  | 1113         | 155     | 110   | 11P   | nr 9  |             | 160    |      |
|   |     |       | Glv          | בומ                | Lvc   | Val     |              | Sar      | T.011 | Cve   | <b>77</b> ∋1 |         | T.611 | Glv   | Val   | Thr         |        |      |
|   | 91  | лгу   | GLY          | лια                | цуз   | 165     | лια          | SCI      | шец   | Cys   | 170          | пр      | neu   | Gry   | VUL   | 175         | vai    |      |
|   |     | T.011 | V = T        | T.011              | Pro   |         | Dhe          | Sar      | Dhe   | Δla   |              | Val     | Тълг  | Ser   | Δen   | Glu         | T.e.11 |      |
|   | 93  | пец   | vai          | шец                | 180   | FIIC    | FIIC         | 261      | FIIC  | 185   | Gry          | vai     | ıyı   | 361   | 190   | Gru         | ncu    |      |
|   |     | Gln   | tra 1        | Dro                |       | Carc    | Clv          | T and    | Cor   |       | Dro          | Trn     | Dro   | Glu   |       | <u>V</u> al | Trn    |      |
|   | 95  | GIII  | vaı          | 195                | PCI   | Cys     | Gry          | шeu      | 200   | FIIC  | FIO          | пр      | FIO   | 205   | GIII  | vai         | пр     |      |
|   |     | Dho   | Tuc          |                    | C0.x  | 7.~~    | นาไ          | T        |       | T 011 | 17-1         | T 011   | C111  |       | 37-1  | -T ON       | Dro    |      |
|   |     | Pile  | 210          | Ата                | ser   | Arg     | vai          | 215      | IIIL  | Deu   | vai          | Leu     | 220   | PHE   | vai   | Leu         | FIO    |      |
|   | 97  | 17-7  |              | ml <sub>a so</sub> | T1_   | O       | 17- T        |          | TT    | mhss  | 71 ~~~       | T       |       | 7     | 71    | T 011       | 71 *** |      |
|   |     |       |              | THE                | тте   | Cys     |              | Leu      | ıyı   | IIII  | Asp          |         | Leu   | Arg   | Arg   | Leu         |        |      |
|   |     | 225   |              |                    |       |         | 230          | . 01-    | - 77- |       |              | 235     |       |       |       | - 7         | 240    | •    |
|   |     |       | ı val        | Arg                | тет   | _       |              | : GTZ    | Ala   | т г   |              |         | 1 GIZ | у гуз | S AL  |             | Arg    |      |
|   | 101 |       |              | _,                 |       | 245     |              |          |       |       | 250          |         |       | . ~   |       | 255         |        | •    |
|   |     | _     | Val          | . Thr              |       |         | ı Val        | . Le     | ı Val |       |              | ı Ala   | a Val | l Cys |       |             | ı Cys  |      |
|   | 103 |       |              |                    | 260   |         |              | _        |       | 269   |              |         | _     |       | 27    |             |        | -    |
| • |     | -     | Thi          |                    |       | His     | Leu          | ı Ala    |       |       | i Val        | l Ala   | a Let |       |       | r Asp       | Leu    |      |
|   | 105 |       |              | 275                |       |         |              |          | 280   |       |              |         |       | 289   |       |             |        |      |
|   |     |       |              |                    | Pro   | Let     | ı Val        |          |       | : Met | . Ser        | Tyr     |       |       | e Th  | r Sei       | Leu    |      |
|   | 107 | 7     | 290          | )                  |       |         |              | 295      | 5     |       |              |         | 300   |       |       |             |        | •    |
|   |     |       |              |                    |       |         |              |          |       |       |              |         |       |       |       |             |        |      |

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/500,175

DATE: 07/06/2004 TIME: 12:17:47

Input Set : A:\61536 Sequence Listing.txt

|            | Output Set: N:\CRF4\07062004\J500175.raw  |     |
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| 110        | Asp Asn Phe Arg Lys Asn Phe Arg Ser Ile Leu Arg Cys                             |     |
| 111        | 325 330   |     |
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|            | <211> LENGTH: 687   |     |
|            | <212> TYPE: RNA   |     |
| 116        | <213> ORGANISM: Artificial Sequence   |     |
|            | <220> FEATURE:  |     |
| 119        | <223> OTHER INFORMATION: Riboprobe  |     |
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|            | gcaauaugcu gcggaaguuc uuccggaagu ugucaucuag aaaggcguag aggaaggggu               | 12  |
| 124        | ucaggcacga guuggcguag cugaggcugg ugaugacgua ggacauacug augaccagug               | 18  |
| 125        | gggucugggg cagguccgug gucagggcca cgacagaggc cagguggaag ggcguccagc               | 24  |
| 126        | agaggaggca cacggccagc acgacgagga ccaggacggu caccuuccgc cuggccuugc               | 3 ( |
| 127        | cuagagecuu ggeuceagag eggageegea eggeeegeag eeugegeagg aggueugugu               | 36  |
| 128        | agagcacaca gauggugcac acgggcagca cgaagcccag gaccaacgug uagacacggc               | 42  |
| 129        | uggecuugaa ccagaccuge ucgggccacg ggaagcucag cccacagcuu gggaccugca               | 48  |
|            | gcucguugcu guagacgcca gcgaaagaga agaagggcag aaccaggacc gugacgccca               | 54  |
| 131        | gccagacaca caggcuggcg accuucgccc cccgguaggu gcgccagggc auguggcggg               | 60  |
| 132        | accucacggu ggccagcacc accagguauc gguccacgcu caucacggcu aggaaguaga               | 66  |
| 133        | ugcuggagaa gauguuguag uggucga   | 68  |
| 135        | <210> SEQ ID NO: 6  |     |
| 136        | <211> LENGTH: 17  |     |
| 137        | <212> TYPE: PRT   |     |
| 138        | <213> ORGANISM: Porcine   |     |
| 140        | <400> SEQUENCE: 6   |     |
| 141        | Trp Tyr Lys His Thr Ala Ser Pro Arg Tyr His Thr Val Gly Arg Ala                 |     |
| 142        | 1 5 10 15   |     |
| 143        | •   |     |
| 145        | <210> SEQ ID NO: 7  |     |
| 146        | <211> LENGTH: 438   |     |
| 147        | <2125 TYPE DNA  |     |

147 <212> TYPE: DNA

148 <213> ORGANISM: Human

150 <220> FEATURE:

W--> 151 <221> NAME/KEY:

152 <222> LOCATION: 408

153 <223> OTHER INFORMATION:

W--> 155 <400> 7

156 gccccatgag caggccagcg gcgcgccca ccgtgtggta gcggggactc gccacgtgct 60 157 tgtaccacgc gccggagggc agcggcagca ggagcagaag cagcagcagt gccagccgcg 120

158 gccggctcgc gggagccccc cgctcccctg ggcgccacgc cagggcgctc gcgtcgacgg 180 240

159 ccgcccggcg gggcgggcca cgaaccggct cggctggggt tgggcgcgca gtggagttgg

160 gacgcccagg taccggagcg caggaggctg gaggcgagcc gtgggtcccc tgcaggccca 300 161 gctataaccg ctcggtggcc ccgcctcgtt ccgcccctc agtaccgctg ggctccccag 360

W--> 162 atggggggag ggacggaggg aggagaggga accetggcag etggeggngg acgtgggtae 420

163 ttgagcacct cactgagt

165 <210> SEQ ID NO: 8

» location,



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Input Set : A:\61536 Sequence Listing.txt
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|   | 166 | <211> LENGTH: 264      |            |             |               |             |         |
|---|-----|------------------------|------------|-------------|---------------|-------------|---------|
|   | 167 | <212> TYPE: DNA        |            |             |               |             |         |
|   | 168 | <213> ORGANISM: Human  |            |             |               |             |         |
|   | 170 | <400> SEQUENCE: 8      |            |             |               |             |         |
|   | 171 | gatagggtga gcgacgcagc  | cccatgagca | ggccagcggc  | gcggcccacc    | gtgtggtagc  | 60      |
|   | 172 | ggggactcgc cacgtgcttg  | taccacqcqc | cqqaqqqcaq  | cqqcaqcaqq    | aqcaqaaqca  | 120     |
|   | 173 | gcagcagtgc cagccgcggc  | cggctcgcgq | gageceeeg   | ctcccctqqq    | cqccacqcca  | 180     |
|   | 174 | gggcgctcgc gtcgacggcc  | gcccqqcqqq | gcgggccacg  | aaccqqctcq    | actagattta  | 240     |
|   | 175 | ggcgcgcagt ggagttggga  | cgcc       | 5 555 5     | 55 5          | 5 555 5     | 264     |
|   |     | <210> SEQ ID NO: 9     | _          |             | •             |             |         |
|   | 178 | <211> LENGTH: 424      |            |             |               |             |         |
|   | 179 | <212> TYPE: DNA        |            |             |               |             | •       |
|   | 180 | <213> ORGANISM: Human  |            |             |               |             |         |
|   | 182 | <400> SEQUENCE: 9      | •          |             |               |             |         |
|   | 183 | gatagggtga gcgacgcagc  | cccatgagca | ggccagcggc  | geggeecace    | gtgtggtagc  | 60      |
|   | 184 | ggggactcgc cacgtgcttg  | taccacgcgc | cggagggcag  | cggcagcagg    | agcagaagca  | 120     |
|   |     | gcagcagtgc cagccgcggc  |            |             |               |             | 180     |
|   |     | gggcgctcgc gtcgacggcc  |            |             |               |             | 240     |
|   |     | ggcgcgcagt ggagttggga  |            |             |               |             | 300     |
|   |     | gggtcccctg caggcccagc  |            |             |               |             | 360     |
|   | 189 | taccgctggg ctccccagat  | gggggaggg  | acggagggag  | gagagggaac    | cctggcagct  | 420     |
|   | 190 | ggcg                   |            |             |               |             | 424     |
|   | 192 | <210> SEQ ID NO: 10    | •          |             | ·             |             |         |
|   | 193 | <211> LENGTH: 375      |            |             |               |             |         |
|   |     | <212> TYPE: DNA        |            |             |               |             |         |
|   |     | <213> ORGANISM: Human  |            |             |               |             |         |
|   |     | <400> SEQUENCE: 10     | •          |             |               |             |         |
|   | 198 | gcgcctcacc gtgtggtagc  | ggggactcgc | cacgtgcttg  | taccacgcgc    | cggaggcagc  | 60      |
|   | 199 | ggcacgagga gcagaagcag  | cagcagtgcc | agccgcggcc  | ggctcgcggg    | agccccccgc  | 120     |
|   | 200 | tcccctgggc gccacgcagg  | gctacagcgt | cgacggccgc  | ccgcggggcc    | atcgcaaccg  | 180     |
|   | 201 | gctcggctgg gtttgggcgc  | gcagtggagt | tgggacgccc  | aggtaccgga    | gcgcaggagg  | 240     |
|   |     | ctggaggcga gccgtgggtc  |            |             |               |             | 300     |
|   | 203 | gttccgcccc ctcagtaccg  | ctgggctccc | cagaatgggg  | gagggacgga    | gggaggagag  | 360     |
|   |     | ggaaccctgg cagct       |            |             |               |             | 375     |
|   |     | <210> SEQ ID NO: 11    |            |             |               |             | 2       |
|   |     | <211> LENGTH: 260      |            |             |               | 1           | 111     |
|   |     | <212> TYPE: DNA        |            |             | . 0           | 1s expl     | MI      |
|   |     | <213> ORGANISM: Human  |            |             | P             |             |         |
|   |     | <220> FEATURE:         |            |             | / /           | (1 ) 1/     | times   |
| > |     | <221> NAME/KEY:        |            |             |               | 11 /00      | a trans |
|   |     | <222> LOCATION: 2, 61, |            | 213, 237, 2 | 249/          | 10 1-       |         |
|   |     | <223> OTHER INFORMATIO | ON:        |             | $\mathcal{U}$ |             |         |
|   |     | <400> 11               |            | •           |               |             |         |
| > | 217 | chacgttctc ggggacataa  | accetgttet | tgtcctaacc  | cgccaagggg    | ccatggactt  | 60      |
|   | 218 | nagcgcgctg gcgtcgagca  | gagaagtacg | gggccctggg  | ccggggctcc    | ggtgaaccgg  | 120     |
|   |     | cccctgctac cgctactgct  |            |             |               |             | 180     |
|   |     | aagcacgtog cgagccctcg  | ctatcacaca | gtoggtcgtg  | cctccgggct    | gctcat(nggg | 240     |
|   |     | ctgcgccgnt cgtcctacct  |            |             |               |             | 260     |
| • | 223 | <210> SEQ ID NO: 12    |            |             |               |             |         |
|   |     |                        |            |             |               |             |         |

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RAW SEQUENCE LISTING

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Input Set : A:\61536 Sequence Listing.txt
Output Set: N:\CRF4\07062004\J500175.raw

224 <211> LENGTH: 24 225 <212> TYPE: DNA 226 <213> ORGANISM: Artificial Sequence 228 <220> FEATURE: 229 <223> OTHER INFORMATION: Primer 231 <400> SEQUENCE: 12 232 aactccactg cgcgcccaaa ccca 24 234 <210> SEQ ID NO: 13 235 <211> LENGTH: 24 236 <212> TYPE: DNA 237 <213> ORGANISM: Artificial Sequence 239 <220> FEATURE: 240 <223> OTHER INFORMATION: Primer 242 <400> SEOUENCE: 13 243 tctcccacag ctcctgaacc cacq 24 245 <210> SEQ ID NO: 14 246 <211> LENGTH: 375 247 <212> TYPE: DNA 248 <213> ORGANISM: Human 250 <400> SEQUENCE: 14 251 aactccactg cgcgcccaaa cccagccgag ccggttcgtg gcccgccccg ccgggcggcc 252 gtcgacgcga gcgccctggc gtggcgccca ggggagcggg gggctcccgc gagccggccg 120 253 cggctggcac tgctgctgct tctgctcctg ctgccgctgc cctccggcgc gtggtacaag 180 254 cacgtggcga gtccccgcta ccacacggtg ggccgcgccg ctggcctgct catggggctg 255 cgtcgctcac cctatctgtg gcgccgcgcg ctgcgcgcgg ccgccgggcc cctggccagg 256 gacaccetet ceceegaace egeageeege gaggeteete teetgetgee etegtgggtt 257 caggagctgt gggag 375 259 <210> SEQ ID NO: 15 260 <211> LENGTH: 125 261 <212> TYPE: PRT 262 <213> ORGANISM: Human 264 <400> SEQUENCE: 15 265 Asn Ser Thr Ala Arg Pro Asn Pro Ala Glu Pro Val Arg Gly Pro Pro 266 1 267 Arg Arg Ala Ala Val Asp Ala Ser Ala Leu Ala Trp Arg Pro Gly Glu 269 Arg Gly Ala Pro Ala Ser Arg Pro Arg Leu Ala Leu Leu Leu Leu 35 271 Leu Leu Leu Pro Leu Pro Ser Gly Ala Trp Tyr Lys His Val Ala Ser 55 273 Pro Arg Tyr His Thr Val Gly Arg Ala Ala Gly Leu Leu Met Gly Leu 275 Arg Arg Ser Pro Tyr Leu Trp Arg Arg Ala Leu Arg Ala Ala Ala Gly 85 90 277 Pro Leu Ala Arg Asp Thr Leu Ser Pro Glu Pro Ala Ala Arg Glu Ala 278 100 105

279 Pro Leu Leu Pro Ser Trp Val Gln Glu Leu Trp Glu

120

115

282 <210> SEO ID NO: 16

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/10/500,175

DATE: 07/06/2004 TIME: 12:17:48

Input Set : A:\61536 Sequence Listing.txt
Output Set: N:\CRF4\07062004\J500175.raw

#### Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:7; N Pos. 408
Seq#:11; N Pos. 2,61,147,189,213,237,249
Seq#:95; Xaa Pos. 21
Seq#:103; Xaa Pos. 21
Seq#:104; Xaa Pos. 21
Seq#:105; Xaa Pos. 1
Seq#:106; Xaa Pos. 1
Seq#:111; Xaa Pos. 1
Seq#:112; Xaa Pos. 1
Seq#:113; Xaa Pos. 1

US/10/80/175

| <210> 103 <211> 23 <212> PRT <213> Artificial Sequence PIS EXPIAIN Emundatory, if <220> <220> <221> <221> <221> <221> <221> <221> <222> <221> <222> <221 <222> <221 <222> <221 <222 <221 <223 <221 <223 <221 <223 <221 <223 <221 <223 <221 <223 <221 <223 <221 <223 <224 <224 <225 <225 <225 <226 <227 <227 <227 <227 <227 <227 <227 |
|--|
| <221> PIS SEE THE THE BOOK (2/3) TOSPON  |
| <222> 21 / / / / / / / / / / / / / / / / / /   |
| <222> 21<br><223> Xaa on the 21st position means Met (0) Summary<br>Sheet. artificial Unknown Sheet.   |
| Cheet, armin   |
| <400> 103  |
| <400> 103 Trp Tyr Lys His Thr Ala Ser Pro Arg Tyr His Thr Val Gly Arg Ala  1 10 15   |
| 1 5 10 15  |
| 1 Ala Gly Leu Leu Xaa Gly Leu 20 IN Section  |
|  |
| (2207  |
| (2237.   |
| (20)   |
|  |

The type of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/500,175

DATE: 07/06/2004 TIME: 12:17:48

Input Set : A:\61536 Sequence Listing.txt Output Set: N:\CRF4\07062004\J500175.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:151 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7 L:155 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:153 L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:360 L:212 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:11 L:216 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:11,Line#:214 L:217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0 M:341 Repeated in SeqNo=11 L:1289 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:95 L:1296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:16 L:1377 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:103 L:1384 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103 after pos.:16 L:1393 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:104 L:1400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104 after pos.:16 L:1409 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:105 L:1414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105 after pos.:0 L:1425 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:106 L:1430 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:0 L:1481 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:111 L:1486 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111 after pos.:0 L:1497 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:112 L:1502 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112 after pos.:0 L:1513 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:113 L:1518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113 after pos.:0 L:2069 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:150, Line#:2067

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Total Number of Pages in This Submission

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|-------------------------------------|---|
| Application Number                  | 10/500,175-Conf. #3286                              |
| Filing Date                         | June 25, 2004                                       |
| First Named Inventor                | Hirokazu Matsumoto                                  |
| Art Unit                            | N/A   |
| Examiner Name                       | Not Yet Assigned                                    |
| Attorney Docket Number              | 61536(46342)  |

| EN  | ICLOSURES (Check all that app                                     | oly)   |  |  |  |
|---|---|--|--|--|--|
| Fee Transmittal Form                              | Drawing(s)  | After Allowance Communication to TC                                  |  |  |  |
| Fee Attached                                      | Licensing-related Papers  | Appeal Communication to Board of Appeals and Interferences           |  |  |  |
| X Amendment/Reply                                 | Petition  | Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)       |  |  |  |
| After Final                                       | Petition to Convert to a Provisional Application                  | Proprietary Information  |  |  |  |
| Affidavits/declaration(s)                         | Power of Attorney, Revocation<br>Change of Correspondence Address | Status Letter  |  |  |  |
| Extension of Time Request                         | Terminal Disclaimer   | X Other Enclosure(s) (please Identify below):                        |  |  |  |
| Express Abandonment Request                       | Request for Refund  | Sequence Listing Paper Copy (36 pages); Sequence Listing Diskette,   |  |  |  |
| Information Disclosure Statement                  | CD, Number of CD(s)   | Sequence Statement (1 page); and Copy of Notification to Comply with |  |  |  |
| Certified Copy of Priority Document(s)            | Landscape Table on CD   | Requirements.  |  |  |  |
| Reply to Missing Parts/<br>Incomplete Application | Remarks   |  |  |  |  |
| Reply to Missing Parts under 37 CFR 1.52 or 1.53  |   |  |  |  |  |
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| Firm Name EDWARDS & ANGE                          |   |  |  |  |  |
| Signature   | RIM   |  |  |  |  |
| Printed name Jennifer K. Rosenfie                 | ld /  |  |  |  |  |
| Date December 27, 2004                            | Reg. No.  | 53,531   |  |  |  |

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| Dated: December 27, 2004 | Signature: Sun Tydlas   | (Sharon Bizokas) |